

## ROTARY PROBE FOR CLEANING AN INTERNAL CAVITY

### Field of the Invention

[0001] This invention relates to efficiently dislodging foreign material from an internal cavity of an object such as a turbine blade and, in particular, to dislodging foreign material from hereto for relatively inaccessible regions inside an airfoil cavity.

### Related Application

RC [0002] This invention relates to U.S. Patent Application serial number 10/271,681 entitled Apparatus and Method for Cleaning Airfoil Internal Cavity, filed on October 15, 2002 <sup>now U.S. Patent No. 6,805,140</sup> and assigned to the assignee of the present invention and which is incorporated herein by reference.

### Background of the Invention

[0003] The turbine blades found in most, if not all, jet engines in use today are cooled by passing a coolant through the interior of the blade. The coolant cavity typically has a torturous path of travel and may include one or more 180° turns. During use of the engine or repairs performed on the parts, foreign matter may enter the cavities of the engine blades and become adhered to the walls of the cavities, particularly in the hard to reach bend regions. In an effort to dislodge foreign matter from the walls of the blade cavities, metal wires of varying diameters are passed into the blade cavities through openings in the blade roots and the wire is turned at a speed that is sufficient high enough to dislodge any foreign material that it comes in contact with. This type of device works well in easy to reach locations. However, the wires cannot readily contact foreign matter that has lodged in the hard to reach areas. In addition, the flexible wire has a tendency to hang up on the walls of the cooling cavity making maneuvering of the probe rather difficult.